

4 of 5 JUN 26 REC'D 198870

**SEARCH REQUEST FORM** Scientific and Technical Information Center - EIC2800  
Rev. 1/26/2006 This is an experimental format -- Please give suggestions or comments to Jeff Harrison, JEF-4B68, 22511.

Date 6/23/06 Serial # D91887,827 Priority Application Date 6/27/01

Your Name M. Lewis Examiner # 78172

AU 2522 Phone 292-1838 Room TA30

In what format would you like your results? Paper is the default. PAPER DISK EMAIL  
If submitting more than one search request form, please prioritize the searches in order of need.

Where have you searched so far on this case?

Circle: USPT DWPI EPO Abs JPO Abs IBM TDB

Other:

Need before 7/4

What relevant art have you found so far? Please attach citations or Information Disclosure Statements.

What types of references would you like? Please checkmark:

Primary Refs ☒ Nonpatent Literature ☐ Teaching Refs ☐  
Secondary Refs ☐ Foreign Patents ☐ Other ☐

Is this a "Fast & Focused Search" request? (Circle One) YES NO

A "Fast & Focused Search" is completed in 2-3 hours (maximum). The search must be on a very specific topic and meet certain criteria. The criteria are posted in EIC2800 and on the STIC NPL Web Page at <http://uspto-a-patfr-2/siraapps/stic/npl/nplsearch.htm>

What is the topic, such as the novelty, motivation, utility, or other specific facets defining the desired focus of this search? Please include the concepts, synonyms, keywords, acronyms, registry numbers, definitions, structures, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract and pertinent claims.

Claims 1-6, 11 & 12  
Cooled Metal / Internal Tensile  
Problem: See page 1  
Solution: 11 11 2

**Staff Use Only**

Searcher: Michael Oliver

Searcher Phone: 571-272-2663

Searcher Location: STIC-EIC2800, JEF-4B68

Date Searcher Picked Up: 6/27/06

Date Completed: 6/27/06

Searcher Prep/Rev Time: 117

Online Time: 145

**Type of Search**

Structure (#) ☐

Bibliographic ☒

Litigation ☐

Fulltext ☐

Patent Family ☐

Other ☐

**Vendors**

STN ☒

Dialog ☒

Questel/Orbit ☐

Lexis-Nexis ☐

WWW/Internet ☐

Other ☒

~~1:44~~  
Tue, 27 Jun 2006, 1:54:05 PM EST

## Search Query Display

Recent Search Queries		Results
#1	(((internal* or intrinsinc*)<near/3>(stress* or strain*)) <in>metadata)) <and> (pyr >= 1950 <and> pyr <= 2001)	894
#2	(((internal* or intrinsinc*)<near/3>(stress* or strain*)) and (whisker* growth) )<in>metadata)) <and> (pyr >= 1950 <and> pyr <= 2001)	0
#3	(((internal* or intrinsinc*)<near/3>(stress* or strain*)) and (whisker*))<in>metadata)) <and> (pyr >= 1950 <and> pyr <= 2001)	0
#4	(((internal* or intrinsinc*)<near/3>(stress* or strain*)) and (tin or metal* or alloy*))<in>metadata)) <and> (pyr >= 1950 <and> pyr <= 2001)	231
#5	(((internal* or intrinsinc*)<near/3>(stress* or strain*)) and (tin or metal* or alloy*)) and (grain size))<in>metadata)) <and> (pyr >= 1950 <and> pyr <= 2001)	10
#6	(((internal* or intrinsinc*)<near/3>(stress* or strain*)) and (tin or metal* or alloy*)) and (grain size))<in>metadata)) <and> (pyr >= 1950 <and> pyr <= 2001)	10

## IEEEExplore# Search History

Tue, 27 Jun 2006, 2:16:51 PM EST

## Search Query Display

## Recent Search Queries

## Results

#1 (((whisker\* growth))<in>metadata)) <and> (pyr >= 1950 <and>  
pyr <= 2001)

9

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**Results for search query**

All = ("internal\*" OR "intrinsic\*") AND ("stress\*" OR "strain\*") AND ("metal\*" OR "tin" OR "alloy\*") AND ("whisker")

From Jan 1960 To Jun 2006

All = ("whisker\*" AND "growth") AND ("tin\*" OR "alloy\*")

From Jan 1960 To Jun 2001

1 Disclosures found

**Results for search query**

All = ("whisker\*" AND "growth")

From Jan 1960 To Jun 2001

2 Disclosures found

6/27/2006 4:14:48 PM  
6/27/2006 3:37:27 PM

[File 2] INSPEC 1898-2006/Jan W2  
[File 6] NTIS 1964-2006/Jan W4  
[File 8] Ei Compendex(R) 1970-2006/Jan W4  
[File 34] SciSearch(R) Cited Ref Sci 1990-2006/Jan W4  
[File 434] SciSearch(R) Cited Ref Sci 1974-1989/Dec  
[File 35] Dissertation Abs Online 1861-2006/Jan  
[File 65] Inside Conferences 1993-2006/Jan W5  
[File 94] JICST-EPlus 1985-2006/Nov W3  
[File 99] Wilson Appl. Sci & Tech Abs 1983-2006/Apr  
[File 144] Pascal 1973-2006/Jan W2  
[File 23] CSA Technology Research Database 1963-2006/Jan  
[File 103] Energy SciTec 1974-2006/Jan B1  
[File 31] World Surface Coatings Abs 1976-2006/Jan  
[File 95] TEME-Technology & Management 1989-2006/Jan W5  
[File 68] Solid State & Superconductivity Abstracts 1966-2006/Jan  
[File 60] ANTE: Abstracts in New Tech & Engineer 1966-2006/Jan  
[File 293] Engineered Materials Abstracts 1966-2006/Jan  
[File 239] Mathsci 1940-2005/Feb  
[File 256] TECINFOSOURCE 82-2005/DEC

# Set Items Description

S1 6149581 S (METAL????? OR SOLID OR HARD????? OR RIGID?????) (3N) (COAT????? OR LAYER????? OR FILM????? OR FINISH????? OR LAMINA????? OR OVERLAY????? OR OVER()LAYER????? OR SHEET?????) OR METAL?????

S2 4405276 S (TENSILE OR DUCTILE OR STRETCH????? OR WORK????? OR MALLEABLE OR FLEX?????) (3N) (STRESS????? OR STRAIN????? OR PRESSUR????????? OR STRENGTH?????) OR TENSILE OR STRESS????? OR STRAIN?????

S3 8921626 S INTRINSIC????? OR BUILTIN OR BUILT()IN OR INBUILT OR IN()BUILT OR CONSTITUT????? OR INHERENT??? OR INTEGRA????? OR UNDERLY????? OR UNDER()LY??? OR INTERNAL????? OR RESIDENT????? OR INCORPORAT????? OR INSIDE? ? OR (INTERNAL????? OR INTRINSIC) (2N) (STRESS????? OR STRAIN?????)

S4 16374913 S GRAIN????? (3N) (THICK??????? OR SIZE? ? OR DIMENSION? ?) OR THICK??????? OR SIZE? ? OR DIMENSION????? OR RANGE? ? OR PROPORTION????? OR RATIO? ?

S5 22755 S UNDERLAYER????? OR UNDERCOAT????? OR UNDERPLAT????? OR UNDERCOVER????? OR UNDER() (LAYER????? OR COAT??? OR PLAT??? OR FINISH????? OR COVER?????)

S6 2883410 S WHISKER????? OR FILAMENT? ? OR HAIR????? OR HAIRLIKE OR HAIR()LIKE OR STRAND? ? OR FIBER? ? OR FIBRE? ? OR FRAGMENT?????

S7 5470571 S NICKEL OR NI OR NICKEL(2N)ALLOY????? OR COBALT OR CO OR COBALT(2N)ALLOY????? OR IRON OR FE OR IRON(2N)ALLOY??? OR TIN OR SN OR TIN(2N)ALLOY?????

S8 2552 S (INHIBIT????? OR PREVENT??????? OR STOP????? OR SUPPRES??????? OR ATTENUAT??????? OR ELIMINAT????? OR MINIMI??????????? OR DECREAS??????? OR REDUC??????? OR LOWER????? OR HINDER????????? OR QUENCH?????) (3N)WHISKER?????????

S9 6 S S1 AND S2 AND S3 AND S4 AND S5 AND S6 AND S7

S10 2 RD (unique items)

S11 4 S S1 AND S2 AND S3 AND S4 AND S5 AND S7 AND S8

S12 1 RD (unique items)

S13 1745 S S2 AND S3 AND S4 AND S6 AND S7

S14 17 S S13 AND S8

S15 14 RD (unique items)

S16 7 S S15 AND PY<=2001

S17 4709 S TIN(5N) (STRESS??????? OR STRAIN?????)

S18 26 S S17 AND S8

S19 10 S S18 AND S3

S20 5 RD (unique items)

S21 2 S S20 AND PY<=2001

S22 121473 S (INTERNAL????? OR INTRINSIC?????) (3N) (STRESS????? OR STRAIN?????)

S23 51 S S22 AND S8

S24 51 S S23 AND S2

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6/27/2006 3:37:27 PM

S25	1	S S24 AND S5
S26	22	S S24 AND S1
S27	17	RD (unique items)
S28	11	S S27 AND PY<=2001
S29	0	S S12 NOT S10
S30	7	S S16 NOT (S10 OR S12)
S31	2	S S21 NOT (S10 OR S12 OR S16)
S32	1	S S25 NOT (S10 OR S12 OR S16 OR S21)
S33	7	S S28 NOT (S10 OR S12 OR S16 OR S21 OR S25)



6/27/2006 4:40:44 PM  
6/27/2006 5:00:39 PM

[File 344] Chinese Patents Abs Jan 1985-2006/Jan  
[File 347] JAPIO Nov 1976-2005/Sep(Updated 060103)  
[File 350] Derwent WPIX 1963-2006/UD,UM &UP=200607  
[File 371] French Patents 1961-2002/BOPI 200209

**Set Items Description**

**S1** 2639870 S (METAL????? OR SOLID OR HARD????? OR RIGID?????) (3N) (COAT????? OR LAYER????? OR FILM????? OR FINISH????? OR LAMINA????? OR OVERLAY????? OR OVER() LAYER????? OR SHEET?????) OR METAL?????

**S2** 504666 S (TENSILE OR DUCTILE OR STRETCH????? OR WORK????? OR MALLEABLE OR FLEX?????) (3N) (STRESS????? OR STRAIN????? OR PRESSUR????????? OR STRENGTH?????) OR TENSILE OR STRESS????? OR STRAIN?????

**S3** 4081146 S INTRINSIC????? OR BUILTIN OR BUILT() IN OR INBUILT OR IN() BUILT OR CONSTITUT??????? OR INHERENT????? OR INTEGRA????? OR UNDERLY????? OR UNDER() LY????? OR INTERNAL????? OR RESIDENT????? OR INCORPORAT????? OR INSIDE? ? OR (INTERNAL????? OR INTRINSIC) (2N) (STRESS????? OR STRAIN?????)

**S4** 4070670 S GRAIN????? (3N) (THICK??????? OR SIZE? ? OR DIMENSION? ?) OR THICK??????? OR SIZE? ? OR DIMENSION????? OR RANGE? ? OR PROPORTION????? OR RATIO? ?

**S5** 28643 S UNDERLAYER????? OR UNDERCOAT????? OR UNDERPLAT????? OR UNDERCOVER????? OR UNDER() (LAYER????? OR COAT????? OR PLAT????? OR FINISH????? OR COVER?????)

**S6** 1256678 S WHISKER????? OR FILAMENT? ? OR HAIR????? OR HAIRLIKE OR HAIR() LIKE OR STRAND? ? OR FIBER? ? OR FIBRE? ? OR FRAGMENT?????

**S7** 1337403 S NICKEL OR NI OR NICKEL(2N) ALLOY????? OR COBALT OR CO OR COBALT(2N) ALLOY????? OR IRON OR FE OR IRON(2N) ALLOY??? OR TIN OR SN OR TIN(2N) ALLOY?????

**S8** 24695 S IC=(H01L-023/495 OR B32B-015/01 OR C25D-003/12 OR C25D-003/30 OR C25D-003/56 OR C25D-003/60 OR C25D-005/10 OR C25D-005/12 OR C25D-005/34 OR C25D-007/00)

**S9** 26991 S MC=(U11-D03A1A OR V04-D01 OR U11-C05C6 OR U11-D03B3)

**S10** 3 S S1 AND S2 AND S3 AND S4 AND S5 AND S6 AND S7

**S11** 721 S (INHIBIT????? OR PREVENT??????? OR STOP????? OR SUPPRES??????? OR ATTENUAT????? OR ELIMINAT????? OR MINIMI??????????? OR DECREAS??????? OR REDUC??????? OR LOWER????? OR HINDER????????? OR QUENCH?????) (3N) WHISKER?????????

**S12** 1 S S1 AND S2 AND S3 AND S4 AND S5 AND S6 AND S11

**S13** 1 S S2 AND S3 AND S4 AND S5 AND S11

**S14** 77 S TIN(3N) (STRESS????? OR STRAIN?????)

**S15** 5 S S14 AND S8

**S16** 6 S S14 AND S9

**S17** 7 S S14 AND S11

**S18** 1 S S14 AND S5

**S19** 0 S S12 NOT S10

**S20** 0 S S13 NOT (S10 OR S12)

**S21** 5 S S15 NOT (S10 OR S12 OR S13)

**S22** 4 S S16 NOT (S10 OR S12 OR S13 OR S15)

**S23** 3 S S17 NOT (S10 OR S12 OR S13 OR S15 OR S16)

**S24** 1 S S18 NOT (S10 OR S12 OR S13 OR S15 OR S16 OR S17)

**Search query:** ((coat\* or layer\* or tin or alloy\*) w/3 metal) and ((internal or intrinsic) w/3 (stress\* or strain\*))

**Language:** English

**Published** 6-22-2001

**Before:**

*12:30 P.M.  
1:12 P.M.*

**Search query:** (internal stress\*) and (metal\* or tin or alloy\*)

**Language:** English

**Published Before:** 6-22-2001 (Original publication date )

**Search query:** (internal stress\*) and (whisker\* or hair\* or strand\* or fiber\*)

**Language:** English

**Published Before:** 6-22-2001 (Original publication date )

6/27/06

09/88782

(FILE 'HOME' ENTERED AT 14:37:06 ON 27 JUN 2006)

FILE 'CAPLUS' ENTERED AT 14:37:23 ON 27 JUN 2006

L1 29551 SEA ABB=ON PLU=ON (INTERNAL##### OR INTRINSIC##### OR  
INHERENT##### OR INSIDE OR WITHIN) (3A) (STRESS##### OR  
STRAIN##### OR TENSILE)  
L2 3088840 SEA ABB=ON PLU=ON METAL##### OR ALLOY##### OR TIN OR SN  
L3 1010260 SEA ABB=ON PLU=ON WHISKER#### OR FILAMENT##### OR FIBRE OR  
FIBER OR HAIR##### OR HAIR LIKE OR STRAND##### OR  
MICROFIBER OR MICROFIBRE  
L4 492 SEA ABB=ON PLU=ON L1 AND L2 AND L3  
L5 21 SEA ABB=ON PLU=ON L4 AND (GRAIN(3A) (SIZE OR THICKNESS#####  
OR DIMENSION#####))  
L6 20 SEA ABB=ON PLU=ON L5 AND PY<=2001  
L7 20 DUP REM L6 (0 DUPLICATES REMOVED)  
L8 3377411 SEA ABB=ON PLU=ON COAT##### OR FILM##### OR LAYER#####  
OR COVER##### OR COVER(W)LAYER OR OVERLAY#####  
L9 20 SEA L7  
L10 6 SEA ABB=ON PLU=ON L9 AND L8  
D L10 1-6 IBIB ABS  
L11 14 SEA ABB=ON PLU=ON L9 NOT L10  
D L11 IBIB ABS 1-14  
L12 469 SEA ABB=ON PLU=ON L1(3A)L3  
L13 84 SEA ABB=ON PLU=ON L12 AND L8  
L14 2 SEA ABB=ON PLU=ON L13 AND L5  
D L14 IBIB ABS 1-2

FILE 'CAPLUS' ENTERED AT 15:09:39 ON 27 JUN 2006

L15 1424 SEA ABB=ON PLU=ON TIN(5A) (STRESS OR STRAIN)  
L16 144 SEA ABB=ON PLU=ON L15 AND L3  
L17 49 SEA ABB=ON PLU=ON L16 AND L8  
L18 49 DUP REM L17 (0 DUPLICATES REMOVED)  
L19 49 SEA L18  
L20 26 SEA ABB=ON PLU=ON L19 AND PY<=2001  
L21 0 SEA ABB=ON PLU=ON L20 AND L5  
L22 26 SEA ABB=ON PLU=ON L20 NOT (L9 OR L14)  
D L22 IBIB ABS 1-26

FILE 'STNGUIDE' ENTERED AT 15:13:34 ON 27 JUN 2006